WHAT IS CLAIMED IS:

1. A method of forming an anode for an alkaline cell comprising the step of:

a) forming a mixture comprising zinc particles, a first fluid, and a binder comprising a gluing agent for binding zinc particles; and

b) at least partially drying the mixture thereby producing a dimensionally stabilized mass comprising said zinc particles.

2. The method of claim 1 comprising the additional steps of:

c) inserting said dimensionally stabilized mass into an alkaline cell; and

d) adding a second fluid to said mass in said cell whereby the second fluid is absorbed into said mass to form the anode.

3. The method of claim 1 wherein said first fluid comprises water.

4. The method of claim 2 wherein said second fluid comprises aqueous alkaline electrolyte.

5. The method of claim 1 wherein said gluing agent for binding the zinc particles comprises polyvinylalcohol.

6. The method of claim 1 wherein said dimensionally stabilized mass is a solid porous mass comprising zinc particles.

7. The method of claim 1 wherein said mixture is at least substantially wrapped with a separator material prior to at least partially drying said mixture.

8. The method of claim 1 wherein said mixture is molded into a dimensionally stabilized shape prior to at least partially drying said mixture.

9. The method of claim 5 wherein the solid porous mass is inserted into the anode cavity of an alkaline cell before adding said second fluid in step (d).

10. The method of claim 9 wherein said solid porous mass expands as said second fluid is absorbed therein.

11. The method of claim 4 wherein the aqueous alkaline electrolyte comprises potassium hydroxide.

12. The method of claim 1 wherein said dimensionally stable mass is storable in ambient air.

13. The method of claim 5 wherein the polyvinylalcohol has a molecular weight between about 85000 and 146000.

14. The method of claim 1 wherein said drying in step b) is effected by heating said mixture.

15. The method of claim 1 wherein said binder further comprises a crosslinked acrylic acid polymer gelling agent.

16. The method of claim 1 wherein said binder further comprises a gelling agent comprising a starch graft copolymer of polyacrylic acid and polyacrylamide.

17. The method of claim 1 wherein said binder further comprises CARBOPOL C940 crosslinked acrylic acid polymer.

18. The method of claim 1 wherein said binder further comprises a mixture of CARBOPOL C940 crosslinked acrylic acid polymer and WATER-LOCK A-221 starch graft copolymer.

19. The method of claim 1 wherein said mixture further comprises indium in total amount between about 200 and 1000 ppm of the zinc.

20. The method of claim 1 wherein said mixture further comprises a surfactant.

21. The method of claim 20 wherein said surfactant comprises an organic phosphate ester.

22. The method of claim 8 wherein said mixture is molded into the approximate shape of the anode cavity of an alkaline cell.

23. A method of forming an anode for an alkaline cell comprising the step of:

a) forming a mixture comprising zinc particles, a binder comprising an alcohol such as polyvinylalcohol, and water;

b) drying the mixture to evaporate at least a portion of the water therein and thereby producing a dimensionally stabilized mass comprising said zinc particles;

c) inserting said dimensionally stabilized mass into the anode cavity of an alkaline cell; and

d) adding a fluid to the anode cavity whereby said fluid is absorbed by said mass and thereby forms said anode.

24. The method of claim 23 wherein said fluid comprises aqueous alkaline electrolyte.

25. The method of claim 23 wherein said dimensionally stabilized mass is a solid porous mass comprising zinc particles.

26. The method of claim 25 wherein said solid porous mass expands as said fluid is absorbed therein in step (d).

27. The method of claim 23 wherein said mixture is at least substantially wrapped with a separator material prior to drying said mixture.

28. The method of claim 23 wherein said mixture is molded into a designated shape prior to drying said mixture.

29. The method of claim 24 wherein the aqueous alkaline electrolyte comprises potassium hydroxide.

30. The method of claim 23 wherein said drying in step b) is effected by heating said mixture.

31. The method of claim 23 wherein the polyvinylalcohol has a molecular weight between about 85000 and 146000.

32. The method of claim 23 wherein said binder further comprises a gelling agent.

33. The method of claim 23 wherein said binder further comprises a crosslinked acrylic acid polymer gelling agent.

34. The method of claim 23 wherein said binder further comprises a gelling agent comprising a starch graft copolymer of polyacrylic acid and polyacrylamide.

35. The method of claim 23 wherein said binder further comprises CARBOPOL C940 crosslinked acrylic acid polymer.

36. The method of claim 23 wherein said binder further comprises a mixture of CARBOPOL C940 crosslinked acrylic acid polymer and WATER-LOCK A-221 starch graft copolymer.

37. The method of claim 23 wherein said mixture prior to drying further comprises indium in total amount between about 200 and 1000 ppm of the zinc.

38. The method of claim 23 wherein said mixture prior to drying further comprises a surfactant.

39. The method of claim 38 wherein said surfactant comprises an organic phosphate ester.

40. The method of claim 25 wherein said solid porous mass is storable in ambient air.

41. The method of claim 23 wherein said mixture is molded into the approximate shape of the anode cavity of an alkaline cell prior to drying said mixture.

42. An electrochemical cell comprising a housing, a positive and a negative terminal, an anode comprising zinc and polyvinylalcohol, an aqueous alkaline electrolyte solution, a separator, and a cathode comprising a cathode active material.

43. The cell of claim 42 wherein said cell is a primary cell.

44. The cell of claim 42 wherein the aqueous electrolyte comprises potassium hydroxide.

45. The cell of claim 42 wherein the polyvinylalcohol has a molecular weight between about 85000 and 146000.

46. The cell of claim 42 wherein the cathode comprises manganese dioxide.

47. The cell of claim 42 wherein the zinc comprises zinc particles having a mean average particle size between about 30 and 1000 micron.

48. The cell of claim 42 wherein the zinc comprises zinc particles having a mean average particle size between about 30 and 400 micron.

49. The cell of claim 42 wherein said anode further comprises a binder comprising a gelling agent comprising a crosslinked acrylic acid polymer.

50. The cell of claim 42 wherein said anode further comprises a binder comprising a gelling agent comprising starch graft copolymer of polyacrylic acid and polyacrylamide.

51. The cell of claim 42 wherein said anode further comprises a surfactant.

52. The cell of claim 51 wherein said surfactant comprises an organic phosphate ester.

53. The combination of an alkaline cell housing having an anode cavity therein and a porous mass inserted into said anode cavity, said mass comprising zinc particles bound together forming a network of zinc particles with void spaces therebetween, said mass being dimensionally stabilized.

54. The combination of claim 53 wherein said mass is a solid porous mass.

55. The combination of claim 54 wherein said solid porous mass is at least substantially dry.

56. The combination of claim 53 wherein said mass is at least substantially wrapped with a separator material.

57. The combination of claim 56 wherein said separator material adheres to said solid mass.

58. The combination of claim 54 wherein said solid porous mass at least substantially fills said anode cavity.

59. The combination of claim 53 wherein said network of bound zinc particles extends at least substantially throughout said mass.

60. The combination of claim 59 wherein said zinc particles is uniformly distributed within said network.

61. The combination of claim 54 whererin said mass has a porosity of between about 25 and 50 percent by volume.

62. The combination of claim 51 wherein polyvinylalcohol coats a portion of the surface of said zinc particles thereby binding said zinc particles together forming said network of zinc particles.

63. The combination of claim 62 wherein said polyvinylalcohol has a molecular weight between about 85000 and 146000.

64. The combination of claim 53 further comprising a binder comprising acrylic acid polymer between said zinc particles.

65. The combination of claim 53 further comprising a surfactant.

66. The combination of claim 65 wherein said surfactant comprises an organic phosphate ester.

67. The combination of claim 53 wherein said zinc particles have a mean average size of between about 30 and 1000 micron.

68. The combination of claim 53 wherein said zinc particles have a mean average size of between about 30 and 400 micron.

69. The combination of claim 53 wherein said mass further comprises indium in total amount between about 200 and 1000 parts by weight indium per million parts zinc.

70. The combination of an alkaline cell housing having an anode cavity therein and a dimensionally stabilized mass comprising anode active material inserted into said anode cavity.

71. The combination of claim 70 wherein said mass at least substantially fills said anode cavity.

72. The combination of claim 70 wherein said mass is a solid porous mass.

73. The combination of claim 72 wherein said mass comprises zinc particles bound together forming a network of zinc particles with void spaces therebetween.

74. The combination of claim 73 wherein said network of bound zinc particles extends at least substantially throughout said mass.

75. The combination of claim 72 wherein said mass has a porosity of between about 25 and 50 percent.